

REMARKS

An Office Action was mailed on September 20, 2004. Claims 4, 5, 8, 9, 12 and 13 are pending, of which claims 5 and 13 are independent claims.

Applicant gratefully accepts the Examiner's indication of allowance of Claims 5, 8, 9, and 12 if rewritten to obviate the objections and amended to overcome the 35 U.S.C. §112, second paragraph rejections.

Thus, independent claim 5 and claims 8, 9 and 12 depending from claim 5 are now amended to overcome the rejection made under 35 U.S.C. §112, second paragraph. As now claimed, filter cartridges 5 are operable with the main gas stream 11 and filter elements 5A are operable with the bypass gas stream 8. Furthermore, chambers 6A and 6 are now claimed to be in fluid communication with an outlet 11 for a main gas stream and one chamber has an outlet for a by-pass gas stream.

Support for the amendments may be found at least on pages 6-8 of the specification, Fig. 1, and the specification and references as a whole.

Applicant believes that claim 5 and its dependent claims are now in condition for allowance and the same is now earnestly solicited.

Independent claim 13 and its dependent claim 4 stand rejected under 35 U.S.C. §103(a) as being unpatentable over DE 195 46068 to Lork et al., (Lork) and as being unpatentable over Lork in view of U.S. Patent No. 3,296,319 to Bohl et al. (Bohl), respectively.

The present invention is a method of removing dust particles from a fluidized-bed reactor using a bypass gas stream and a main gas stream that are removed respectively from two spaces of the dome part that are separated from each other. Lork does not disclose, teach or reasonably suggest this claimed limitation.

The presently claimed invention is a method of removing dust particles from a fluidized-bed reactor using sintered metal filter cartridges. It is admitted that Lork does not disclose, teach, or suggest this inventive step. Office Action, page 5. Furthermore, it is admitted that likewise Lork does not disclose, teach, or suggest a structure wherein the main gas stream and by-pass gas stream are removed from separate spaces of the dome part. Office Action, page 5.

The Examiner finds that use of sintered metal filter cartridges and removal of the two gas streams are obvious and in support thereof cites In re Tarczy-Hornoch, In re Edwards, Stalego v. Heymes, Ex parte Hart, In re Freeman, and In re Sweeney.

Applicant respectfully questions the applicability of any of these five cases to a finding of obviousness. Only In re Tarczy-Hornoch and Stalego v. Heymes are referenced with Manual of Patent Examining Procedures (M.P.E.P.) and then In re Tarczy-Hornock is cited at M.P.E.P. 2173 05(v) in connection with 35 U.S.C. §112, second paragraph and Stalego v. Heymes is cited at M.P.E.P. 2307 in connection with interference. While omission from the M.P.E.P. is not dispositive, omission suggests that the case law is not sufficiently clear for administrative law purposes.

The other cases seem similarly situated to discuss rejection under 35 U.S.C. §112 not obviousness rejections. Accordingly, the Examiner is requested to withdraw the rejection. In addition to or in the alternative, the Examiner is respectfully requested to withdraw the rejection since the facts of each of the above cases is not sufficiently similar to the present application. M.P.E.P. 2144.

Notwithstanding the above arguments, Lork does not disclose, teach, or reasonably suggest the presently claimed invention of using a bypass gas stream and a main gas stream to remove dust particles from a fluidized-bed reactor.

Lork discloses a process wherein fine dust particles are separated external to reactor 7 in a separation unit 26 and then pass to a desorber 30 for desorption of the dust particles. The desorbed dust particles are subsequently passed from a retaining unit 45 to cyclonic separator 47 for classifying the dust particles (step a).

Lork discloses that the dust particles are classified external to the reactor into a large particle fraction having size greater than $5\mu\text{m}$ (step b) and a small particle fraction having size less than $5\mu\text{m}$ (step c). The large particle fraction is then returned to the reaction zone in the reactor (step d) to aid in further reactions. Lork, page 2, lines 37-49.

The step of supplementing fluidized-bed of the reactor with fine particle dust as disclosed in step d of Lork, yields inherently to a deterioration of properties of the fluidized-bed, for example, insufficient fluidization or a worsening of thermal transfer. Consequently, suitable measures must be taken to correct the properties of the fluidized-bed.

Lork discloses that the properties of the fluidized-bed are adjusted by classifying the removed fine dust particles using complicated apparatus, for example, a cyclonic separator, that are external to the reactor.

The present invention solves the same problem completely differently by removing a partial gas stream as a bypass gas stream and a main gas stream. The bypass gas stream has a predetermined content of dust particle of a size which is smaller than a predetermined size. Therein, all differentiation of fine dust particles that are to be removed is made internal to the reactor. Lork does not disclose, teach, or reasonably suggest such a claimed invention. Accordingly, the Examiner is respectfully requested to withdraw the rejection.

With respect to claim 4, Bohl describes a process wherein the distribution of particle size in a reactor is carefully regulated by the addition of new catalyst. Bohl does not disclose, teach, or suggest the reintroduction of the removed catalyst particles as claimed in the present invention.

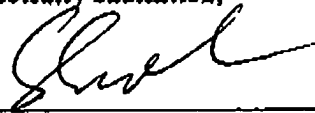
Furthermore, Bohl, Lork, or a combination of the two does not disclose, teach, or reasonably suggest analyzing a change in the heat transfer and a deterioration of the fluidization behavior in addition to analyzing the catalyst. Accordingly, the Examiner is respectfully requested to withdraw the rejection.

All dependent claims are allowable for at least the same reason as the independent claim from which they depend.

If the Examiner finds this application is not in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,



Hassan A. Shakir
Reg. No. 53,922
212.940 6489

CUSTOMER NUMBER 026304

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